REMARKS

FORMAL MATTERS:

Claims 1-20 remain pending after entry of the amendments set forth herein.

By this Amendment, claims 1, 5, 6, 7, 9, 16, and 20 have been amended. Support for these amendments is found throughout the specification and in the claims as originally filed, and in particular at page 3, lines 28- page 4, line 6.

CLAIM REJECTIONS – 35 U.S.C. § 102

Claims 1-10 and 18-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hill *et al.* (US Patent No. 6,088,804).

Hill relates to a network security system which is capable of responding to attacks on the network by recognizing a pattern, or signature, in the type of attack, comparing this to a stored list of patterns of attack to find the closest stored pattern and then responding to the attack in the manner predetermined for the closest stored attack. The signature is a number or graph computed from event logs in the network. These event logs characterize the attack as consisting of particular elements such as viruses, worms, etc. in different proportions, and can also include indications of the location of the attack. The system can also be trained by inputting a signature of a simulated attack, presumably together with the desired response, to the SOM processor so that the SOM processor learns how to respond to the new signature attack. As noted in column 6, lines 26 to 32, the learning process does not involve actual attacks on the network, but instead the input of signatures into the SOM processor. The system is able to evolve as indicated at column 9, lines 35 to 45 by, again, inputting into the security system signatures corresponding to new types of attack and training it to respond appropriately. The response of the system to an attack may be to close down certain nodes of the network.

The claimed invention is directed to a processing system comprising a processing apparatus and a processing agent, where the processing agent is a substance which is administrable to a biological subject and has a primary behavior effective in combination with the processing apparatus to achieve a desired process result, wherein the processing agent further has a distinctive signature characteristic distinguishing it from other processing agents, and wherein the processing system comprises test

functionality to test for the distinctive signature characteristic of the processing agent and to selectively modify subsequent operation of the processing apparatus based on a test result.

In practicing the invention, when administering a substance (e.g., a contrast agent) to a biological subject (e.g., a human, animal or plant) to achieve some desired effect in conjunction with the processing apparatus (e.g., an increase in image contrast in the image taken by an imaging apparatus), the processing apparatus tests for a distinctive signature in the behaviour in the administered substance and selectively modifies its subsequent operation based on the results of such testing. For example, where the correct contrast agent has been administered, the processing apparatus may modify its operation to optimize its subsequent operations accordingly.

Hill does not disclose, teach or suggest, among other claimed elements, a substance which is administerable to a biological subject. Accordingly, withdrawal of this rejection is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 11, 14, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hill *et al.* in view of Ochs *et al* (U.S. Patent Application Publication 2004/0111220).

As explained above, Hill *et al.* relates to a computer network security system which is trainable by inputting signatures of attacks into the system, indicating an appropriate response, and thus allowing it to learn how to respond to such attacks.

Ochs *et al.* discloses a system which, in one example, includes a medical imaging apparatus and an analysis agent. It is, of course, accepted by the applicant that the use of contrast agents for medical imaging was well-known at the priority date of the present application. However, no motivation is indicated in either Hill et al. or Ochs et al. as to why one would modify the computer network security system of Hill et al. in view of the medical image analysis system disclosed in Ochs *et al.* To simply state that doing so achieves an "economic advantage" is not in and of itself motivation – clearly, enhancing the capabilities or applications of any technology provides an economic advantage. Furthermore, Ochs *et al.* and Hill *et al.* are clearly non-analogous arts. The person skilled in the art of one has no reason to look for solutions to problems in the other. Only with hindsight in view of the Applicant's invention would one consider such a combination.

Accordingly, neither Hill et al., Ochs et al. or their combination discloses, teaches or suggest the claimed invention

Claims 11, 14, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hill *et al.* in view of Ochs *et al* in view of as applied to claim 11 and further in view of Durkier *et al.* (U.S. Patent No. 6,225,132).

In particular, the Examiner cites to Drukier *et al.* as disclosing an analysis technique including radio isotopes. Drukier et al. does not make up for the deficiencies of Hill et al. and Ochs et al. Accordingly, for the reasons discuses above, the claimed subject matter is not made obvious by any of the cited references.

Finally, claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hill *et al.* in view of Wong *et al* (U.S. Patent No. 6,264,948).

In particular, Wong *et al.* is described as disclosing a processing system where the processing subject is *vitro*. Similar to the reasons made above, there is no motivation in either Hill et al or Wong et al. to combine their teachings, and to "archive economic advantage" is not in and of itself motivation. Furthermore, Wong *et al.* and Hill *et al.* are clearly non-analogous arts. The person skilled in the art of one has no reason to look for solutions to problems in the other. Only with hindsight in view of the Applicant's invention would one consider such a combination.

Accordingly, neither Hill et al., Wong et al. nor their combination discloses, teaches or suggest the claimed invention of claim 17.

Thus, in summary, the present invention as defined in amended claim 1 requires the administration of a substance to a biological subject, and then a processing apparatus not only effects some desired process result in respect of the biological subject (such as taking a medical image), but also looks for a distinctive signature of the substance and modifies its own behaviour accordingly. None of the cited prior art discloses this concept nor is it obvious how the prior art could be combined to arrive at this concept. It is only with the benefit of knowledge of the present invention that one might try to combine somehow the disclosures of Hill *et al.* with the other cited documents, but even then it is difficult to reconcile a computer system being trained to defend itself against an attack with the idea of looking for a distinctive signature in a substance administered to a biological subject for another (beneficial) reason.

CONCLUSION

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number KEMP-011.

Respectfully submitted,
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Date: February 3, 2006

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